AMENDMENTS TO THE SPECIFICATION

Please replace Paragraphs [0001], [0077] and [0092] with the following paragraphs rewritten in amendment format:

[0001] This application is a continuation of and takes priority from abandoned U.S. Serial Number 10/087677 filed March 1, 2002; and also takes priority from and is a continuation of abandoned U.S. Serial Number 10/004322 filed October 25, 2001, such application claiming priority to German application Serial Number 10058337.7 filed November 24, 2000; each of the aforesaid applications being incorporated herein by reference in their entirety.

[0077] In still another embodiment, a cross-sectional view of an electrically conductive element 100 is shown in Figure 5. The element 110 functions as a bipolar plate, constructed with a thin, substrate sheet 102 having foam flow fields 106 attached to both sides. Preferably, sheet 102 is made from a solid titanium metal sheet. ~~This bipolar plate features a thin barrier sheet 102, preferably made from a solid titanium metal sheet, with foam (about one-half to about 3 millimeters thick)~~ Foam flow fields 106, about one-half to about 3 millimeters thick, can be attached as by welding or brazing ~~to both sides thereof~~. The sheet 102 forms the gas barrier and the foam 106 forms the fluid flow fields. As can be seen, foam 106 has opposed major surfaces 110 and 111. Foam 106 has one major surface 110 facing the metal sheet 102 and another major surface 111 opposite 110. Typically, major surface 111 faces the MEA. As shown in Figures 5, 6 and 7, major surface 111 forms the outer surface of electrically conductive element 100. Foams can be prepared as metal foams or carbon-based (graphite) foams. Metals that can be prepared as a solid foam in accordance with the

present invention include copper, aluminum, nickel, titanium, silver, and stainless steel, with the preferred metals being nickel and stainless steel. Here, the doped tin oxide film 94 is applied to sheet 102 as show in Figure 5. A variety of foamed metals are available from AstroMet, located in Cincinnati, Ohio. Methods for producing these metal foams are described in United States Patent No. 4,973,358. Carbon-based foams are available from Ultra Met.

[0092] Methods of deposition and electrical and other properties of F-doped tin oxide film ~~(SnO_{2-x}:F)~~ (SnO_2:F) can be found in a variety of references including: (1) Acosta et al., "About the structural, optical and electrical properties of SnO_2 films produced by spray pyrolysis from solutions with low and high contents of fluorine," Thin Solid Films 288 (1996) 1-7; (2) Ma et al., "Electrical and optical properties of F-doped textured SnO_2 films deposited by APCVD," Solar Energy Materials and Solar Cells 40 (1996) 371-380; (3) Sekhar et al., "Preparation and study of doped and undoped tin dioxide films by the open air chemical vapor deposition technique," Thin Solid Films 307 (1997) 221-227; (4) Mientus et al., "Structural, electrical and optical properties of SnO_{2-x}:F-layers deposited by DC-reactive magnetron-sputtering from a metallic target in Ar-O_2/CF_4 mixtures," Surface and Coatings Technology 98 (1998) 1267-1271 and (5) Suh, et al., "Atmospheric-pressure chemical vapor distribution of fluorine-doped tin oxide thin films" Thin Solid Films 345 (1999) 240-243.